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**Editorial**

## Hepatitis C in Pakistan- A neglected challenge

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Hepatitis C virus (HCV) is well known etiological agent for causing chronic hepatitis, liver cirrhosis and hepatocellular carcinoma in developing as well as developed countries. An estimated 170 million people are chronically infected with HCV and 3–4 million people are newly infected each year[1]. The World Health Organization estimates that approximately 3% of the world population has been infected with HCV.

HCV infections are serious public health concern in Pakistan. The first description of HCV in Pakistan was in 1992 and since then there is no proper review[2]. With approximately 6% of the population being affected by it (approximately 10 million)[3], it is becoming a Herculean challenge. With the current disease burden, Pakistan has left behind all the major developed countries like Japan, USA and Europe[4].

The annual incidence of HCV in the industrialized nations has fallen in recent years, primarily because of effective blood screening efforts and increased education on the dangers of needle sharing. Contrary to that the burden of HCV related chronic liver disease (CLD) in Pakistan has increased. Studies from the past showed that of all patients presenting with CLD, 16.6% were anti-HCV antibody positive but more recent data shows nearly 60–70% patients with CLD tend to be positive. Medical literature had also reported that nearly 50% patients with hepatocellular carcinoma (HCC) in Pakistan are anti-HCV antibody positive.

Past medical literature reports a highly variable seroprevalence of HCV from different studies in different population and the trend continues within the same province. The reason is primarily attributed to HCV being a blood-borne infection, spreads rather sporadically or in micro epidemics. The

most predominant HCV genotype is genotype 3 (75-90%), followed by genotypes 1, 2, and 5 [5].

In Pakistan, several population groups have been described as being at increased risk of HCV infection. In several published studies, the proportion of patients with HCV infection who received injections is in the range of 16% to 100%. High prevalence of HCV has been recorded among middle-aged (40-50 years) people[6]. Haemodialysis patients were also noted to be at high risk of HCV infection. High HCV prevalence (23.7% to 68.0%) has been noted in this group of patients, and particularly those on long-term haemodialysis[7].

There are about 1.5 million units of blood products transfused each year in Pakistan[8]. Data on the safety of this transfusion process is rare which may be due to the lack of system of reporting infectious or non-infectious adverse events. The risk of HCV transmission through blood transfusion in Pakistan is still unknown but is considered to be high due to a lack of appropriate screening of blood.

Also, number of studies have shown the relationship between therapeutic injections using non-sterile needles and the transmission of HCV [3]. There is an enormous dependence on parenteral therapy for treatment, both in the form of injections and infusion of drips, driven by cultural beliefs in the power of parenteral therapy[6]. The general population of Pakistan typically prefers to be treated by injection rather than oral medication. Thus, patient demands and financial incentives for doctors favor the use of injectable treatment in patient care. Another significant risk factor of HCV transmission which had previously been reported from different regions of Pakistan is daily face and armpit shaving at community barber shops. The delicate skin of the face and armpit are susceptible to micro trauma,

leading to possible exposure to HCV through a contaminated traditional long-handled razor[3, 9]. Additional risk factors that may be important modes of transmission include ear piercing and non-sterile surgical and dental practices of unqualified health care workers (quacks)[10].

The HCV epidemic in Pakistan continues to rise due to lack of education and awareness of the disease, shortage of medically qualified and scientifically trained health care workers and lack of health infrastructure. The government of Pakistan had taken some steps in this area in the past, by announcing a national blood policy in 2003. In 2001–2002 Pakistan received a grant from the Global Alliance for Vaccines and Immunization (GAVI) that has enabled the introduction of Hepatitis B vaccination in routine Expanded Program on Immunization (EPI) [11]. Vaccination for HBV as part of EPI was launched in a nationwide vaccination campaign in 2004[12]. Unfortunately, HCV infection is not a notifiable disease in Pakistan and there is no national data collection system for evaluation of routine risk factors.

In March 2009, government officials reported the Senate that around 8,800,000 people in Pakistan are suffering from deadly hepatitis C while another 5,600,000 are affected by hepatitis B[13] and that availability of diagnostic facilities and awareness campaigns have un-earthed the hidden burden of the disease. The Prime Minister Programme for Prevention and Control of Hepatitis was launched in August 2005 with a total cost of Rs 2.594 billion for a period of five years[12]. The number of patients with the disease since then has increased significantly as the government started to provide free treatment, though on a limited scale. When the programme was launched in 2005-06 the number of patients, most of them poor, who were registered and treated at government hospitals were 10,815 and 1,000 for hepatitis C and B respectively. For the year 2008-09 the figure is 84,773 and 7,204 respectively for the two categories of the disease[13]. If we critically analyze the figures with the present disease burden, we confront with the harsh fact that the gap between people getting affected each year and getting treatment is too wide and only a small population is seeking care with yet uninvestigated numbers of actually getting rid of the disease. The picture gets even gloomier if we realize that this what government is reporting and the ground reality may be even worse. The increasing HCV epidemic is likely to progress to a considerable increase in disease burden over the coming years.

The pillars of HCV infection control are blood safety, the prevention of needle sharing among Intravenous Drug Users (IVD), the strict implementation of standardized preventive measures in healthcare settings, screening of at risk groups and treatment of chronic hepatitis with multiple drug therapy (pegylated interferon and ribavirin). Despite its public health importance, however, how surveillance systems for hepatitis C should be designed is still a matter of debate. Cross sectional surveys on at risk population or groups are essential to estimate the burden of HCV infection and to describe affected persons who will need to be targeted for screening and treatment. However, they reflect past transmission routes, provide no information on the current dynamics of HCV transmission and no data on people currently getting infected.

Although the world is now hearing about Hepatitis awareness specially after commencement of the Hepatitis awareness day On May 19<sup>th</sup> every year from 2008, numerous efforts are required to prevent this day from becoming an event of seminars, lectures and conferences and the rest of the year , we forget about the disease.

We are living unfortunately without HCV vaccine, because of the virus high mutation rate and substantial heterogeneity of the genome of HCV. Still it is largely treatable and HCV infection can be cured by the existing antiviral drugs in more than 50% of the patients[14]. So efforts should be made to save the waste of at least 50% of these needless lives. Hepatitis preventing measures should include a situational analysis and a realistic assessment of the blood requirement in the area, followed by recruitment and maintenance of voluntary, non-remunerated blood donors and standardization and regulation of appropriate blood screening procedures. IDUs are numerous in Pakistani society and though they have a disproportionately high burden of health problems, they have been inadequately studied. Disseminating adequate information about all aspects of HCV is essential in developing patient understanding of the disease. It appears such information can only be effectively and reliably disseminated through effective awareness strategies. We also propose that for health promotion action, programmes should be made to increase awareness and use of specially prepared video clips for the prevention of disease. Media is one of the instrumentalities which facilitates and gives a directional thrust to the efforts to cure the disease if not to treat it. If medicine can treat Hepatitis, media is capable to prevent it with an ultimate goal to cure it through its capabilities to impart education through entertainment.

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